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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,142	08/15/2001	Richard Edwin Harper	YOR920010068US1	8914
21254	7590	10/12/2004	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			MCCARTHY, CHRISTOPHER S	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/929,142

Applicant(s)

HARPER ET AL.

Examiner

Christopher S. McCarthy

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>response to arguments</u> .            |

### DETAILED ACTION

1. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al. U.S. Patent Application Publication US2002/0138786, as cited in prior office action, which was mailed on 4/15/2004.

2. Claims 32-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al. U.S. Patent Application Publication US2002/0138786

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al. U.S. Patent Application Publication US2002/0138786.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

Art Unit: 2113

inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Chefalas teaches a method of reducing warranty costs, comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in the computer system based on said indicators (0035,0036).

As per claim 2, Chefalas teaches the method of claim 1, wherein said indicators comprise indicators of system software and hardware health, said method further comprising: periodically storing said indicators prior to the problem or outage (0036).

As per claim 3, Chefalas teaches the method of claim 2, further comprising: analyzing said indicators to determine whether the problem or outage was due to hardware or software, after the problem or outage occurs (0036).

As per claim 4, Chefalas teaches the method of claim 3, further comprising: presenting information regarding a cause of the problem or outage to a user of the computer system to prevent an unnecessary service call and hardware replacement (0036, 0031).

As per claim 5, Chefalas teaches the method of claim 1, further comprising: depending upon said determining of said hardware-induced problem or outage or said software-induced problem or outage, determining a manufacturer of said hardware or said software having undergone said problem or said outage (0036,0024,0004).

As per claim 6, Chefalas teaches the method of claim 1, wherein, in event of one of a hardware-induced problem or outage and software-induced problem or outage, pre-outage data is

Art Unit: 2113

stored in a log file across the outage (0036), wherein, an event is interpreted to encompass a possible outage of a device.

As per claim 7, Chefalas teaches a method of reducing warranty costs associated with a computer system, comprising: monitoring indicators in a computer system; and, detecting a lack of performance of said computer system; and discriminating whether said lack of performance was caused by a hardware-induced problem or a software-induced problem or outage based on said indicators (0035, 0036), wherein, lack of performance is inherent in the failure of an object in the system.

As per claim 8, Chefalas teaches the method of claim 7, further comprising: gathering pre-lack of performance data, said discriminating being performed based on said pre-lack of performance data (0036).

As per claim 9, Chefalas teaches the method of claim 7, further comprising: recovering from said lack of performance (0012).

As per claim 10, Chefalas teaches the method of claim 8, wherein said lack of performance comprises an outage, and in event of one of said hardware-induced problem or outage and said software-induced problem or outage, said pre-outage data is stored across the outage (0036).

As per claim 11, Chefalas teaches a method of reducing warranty costs, comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in said computer system based on said indicators; and based on said discriminating, reducing a duration of a service call and

Art Unit: 2113

ensuring that a service technician has a correct part on hand at a time of repair

(0035,0036,0004,0032).

As per claim 12, Chefalas teaches the method of claim 11, wherein said indicators comprise indicators of system software and hardware health, said method further comprising: periodically storing said indicators prior to the problem or outage (0036).

As per claim 13, Chefalas teaches the method of claim 12, further comprising: after the problem or outage, analyzing the indicators to determine whether the problem or outage was due to hardware-induced problem or outage or said software-induced problem or outage and which hardware or software subsystem was most likely a cause of the outage, and to produce information (0036).

As per claim 14, Chefalas teaches the method of claim 13, further comprising: presenting the information to a service technician of a computer system to replace or repair a faulty subsystem (0032,0004,0031).

As per claim 15, Chefalas teaches a method of reducing a trouble-shooting cost in a computer system, comprising: sampling system health data from a plurality of sources, and storing said data in a log; determining whether said outage event has occurred; and based on whether said outage event occurs, analyzing logged and other data to judge a likely cause of the event (0036).

As per claim 16, Chefalas teaches the method of claim 15, further comprising if the outage event comprises a software outage or problem, determining whether automatic recovery is possible, and if so, invoking an automatic recovery mechanism and notifying a customer or

Art Unit: 2113

field support personnel that said software outage or problem is the cause of the event, and identifying a faulty subsystem for subsequent troubleshooting (0035,0031,0034).

As per claim 17, Chefalas teaches the method of claim 15, further comprising if the outage event comprises a software outage or problem, determining whether automatic recovery is possible, and if not, indicating that the event is due to said software outage or problem, and is not automatically recoverable, and notifying a customer or service technician to manually recover the fault (0035,0031,0034,0030).

As per claim 18, Chefalas teaches the method of claim 15, further comprising: determining whether the event comprises a software outage or problem and if not, determining whether a diagnosable hardware outage or problem exists (0035,0036).

As per claim 19, Chefalas teaches the method of claim 18, further comprising: if the event is judged to be caused by hardware, examining at least one of a hardware error log, an error register, and a hardware diagnostic, and attempting to localize a replaceable component that caused the event; informing a customer or a service technician that the outage was due to hardware; and manually recovering the hardware by replacing only defective hardware (0035,0031,0004).

As per claim 20, Chefalas teaches a computer node associated with a computer system, comprising: hardware for executing an operating system, at least one application program, and a system health monitoring program, wherein said system health monitoring program gathers system software and hardware health data from an application program, an operating system, and the hardware, and discriminates a cause of an event comprising at least one of a problem or outage of said computer node (0024,0025,0012,0036,0035).

As per claim 21, Chefalas teaches the computer node of claim 20, wherein said computer node comprises sources of information for assessing software and hardware health (0035,0036).

As per claim 22, Chefalas teaches the computer node of claim 21, wherein said information is measured and logged prior to a failure event, and wherein said system health monitoring program monitors at least one of resource consumption data, system and application software error logs, system utilization and performance data, and software error counts (0035,0036).

As per claim 23, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program monitors at least one of concurrent diagnostics, hardware error logs, and hardware error counts, and wherein said system health monitoring program gathers information after the event, including at least one of error logs, crash dumps of memory, error codes, offline or power-on hardware diagnostics, and hardware error registers (0035).

As per claim 24, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes a log device for permanently storing a time history of system software and hardware health data, said log device being readable after an event to determine a likely cause of the event (0036,0037).

As per claim 25, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes an analyzer for analyzing the software and hardware health data (0035,0036).

As per claim 26, Chefalas teaches the computer node of claim 25, wherein said analyzer is run on the computer system that has experienced a problem, or on another execution environment (0035,0036,0012).



Art Unit: 2113

As per claim 27, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program comprises a notifier for notifying a customer or field service support personnel regarding a cause of the outage or problem, whether a service call is necessary, and where the likely cause of the outage or problem resides (0013,0031,0004,0035,0036).

As per claim 28, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program samples a plurality of parameters, said plurality of parameters including at least one of: a parameter indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk; a parameter indicating a number of bytes that reside in said physical memory plus the paging files; a parameter indicating a number of errors that have been reported by transmission control protocol (TCP)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors (0037,0031).

As per claim 29, Chefalas teaches a system for use with a computer system, comprising: a software program for monitoring indicators in a computer (0035, 0036); an outage detector for detecting a problem or outage; a memory for storing pre-outage data of the system; and a discriminator for discriminating whether said outage was caused by a hardware component or a software component of said system (0036).

As per claim 30, Chefalas teaches the system according to claim 29, wherein, in event of an outage of one of said hardware and software, said pre-outage data is stored across the outage (0036).

As per claim 31, Chefalas teaches a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to

Art Unit: 2113

perform a method for reducing warranty costs, said method comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in a computer system based on said indicators (0036,0035), wherein, a memory is inherent in the system in that is capable of storing an event log and a monitoring program.

As per claim 32, Chefalas teaches the method according to claim 1, wherein said indicators comprise indicators of said software health comprising at least one of resource consumption data, system and application error logs, system utilization and preference data, and software error accounts (0036).

As per claim 33, Chefalas teaches the method according to claim 1, wherein said indicators comprise indicators of said hardware health comprising at least one of concurrent diagnostics, hardware error logs, and hardware error counts (0035).

As per claim 34, Chefalas teaches the method according to claim 1, further comprising: continuously monitoring and storing indicators of system software health and hardware health after said problem or outage (0036), wherein the error log is continuously updated since the last error update process.

As per claim 35, Chefalas teaches the method according to claim 34, wherein said indicators monitored after said problem or outage comprise at least one of error logs, crash dumps or memory, error codes, offline or power-on hardware diagnostics and hardware error registers (0036).

As per claim 36, Chefalas teaches the method according to claim 1, wherein said monitoring comprises: sampling a plurality of parameters comprising at least one of a parameter

Art Unit: 2113

indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk, a parameter indicating a number of bytes that reside in said physical memory plus the paging files, a parameter indicating a number of errors that have been reported by transmission control protocol (Tcp)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors (0037, 0031).

As per claim 37, Chefalas teaches the method according to claim 1, wherein another execution environment is used to perform said monitoring (0012).

As per claim 38, Chefalas teaches the method according to claim 1, wherein said monitoring indicators in a computer system comprises monitoring said indicators prior to a problem or outage (0035, 0036), wherein the continuous error log of the system monitors the component and updates itself since the last error process update.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble must consist of a computer-readable medium storing computer-readable instructions, which are executable to perform the desired method.

### ***Response to Arguments***

6. Applicant's arguments filed 7/15/2004 have been fully considered but they are not persuasive.

The applicant has amended the claims and has argued that Chefalas does not teach “monitoring indicators in a computer system.” The examiner respectfully disagrees. Using the definition of monitoring, supplied by the applicant from *Webster’s Universal Encyclopedia Dictionary*, “to watch, keep track of, [of] check usually for a special purpose”, the examiner contends that Chefalas does fulfill this definition in that he uses a process which checks every hardware and software component in the system to find a fault within the device. Therefore, each device is “checked for a special purpose”. Also, Chefalas teaches that an error log is kept in the system since the last agent process. This continuous error logging fulfills the limitation of monitoring a device. As for the “indicators” of the present invention, the agent of the Chefalas system does check every hardware and software device, as described earlier, looking for indication of a fault within the device; therefore, the indication of each device is inherent in that either the agent finds a fault or it does not based upon the indication of the device. Therefore, all applicable rejections stand.

The applicant also has argued that Chefalas does not discriminate between a software and a hardware fault. The examiner respectfully disagrees. In paragraphs 0035, and 0036 of Chefalas, he teaches the checking of hardware devices and also the checking of software devices and then sends the results to the Web server for possible solutions. Therefore, it is inherent that the server know the difference between hardware and software faults so that a solution can be searched for and returned for implementation. Therefore, all applicable rejections stand.

Furthermore, the applicant has argued that Chefalas does not teach a fully automated solution, as in claim 16. The examiner respectfully disagrees. The claim language of claim 16 states that a determination is made to whether an automatic recovery is possible, and then

Art Unit: 2113

reported to a troubleshooter. Chefalas teaches that a diagnosis is made as to the problem of the device and then is sent to the server for best solutions. It is the interpretation of the examiner that the process of full automation is not taught in the limitations of the present invention in claim 16. Full automation implies that no manual troubleshooting is needed. Also, Chefalas teaches in his claim language of claim 11 that a solution to the problem is automatically sent to the device and automatically installed to the device to correct the fault. Therefore, claim 16 stands rejected.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (703)305-

Art Unit: 2113


7599, and (571) 272-3651 after 10/13/2004. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csm

October 7, 2004

  
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